What is claimed is:

1. An RF-type amplification system, comprising:

a portable remote unit including: a microphone for detecting a voice and for generating corresponding voice signals; a central processing unit configured to generate control signals; a transmitter for generating first RF signals containing the voice signals and the control signals; an antenna configured to transmit the first RF signals and to receive second RF signals; and a receiver for detecting the second RF signals; and

a base unit including: an antenna adapted to receive the first RF signals from the remote unit; a receiver for detecting the first RF signals and for separating the first RF signals into the voice signals and the control signals; a communications interface configured to deliver the voice signals to an external device; a code detector for identifying the control signals; a central processing unit for evaluating the control signals and for controlling delivery of the voice signals from the communications interface in accordance with values of the control signals; and a transmitter for generating the second RF signals containing control signals but no voice signals, said second RF signals being transmitted to said portable remote unit via the antenna of the base unit, thereby effecting one-way transmission of voice signals and two-way transmission of control signals between said portable remote unit and said base unit.

2. The amplification system according to claim 1, wherein the control signals include: a frequency identity code which identifies a transmit frequency of said portable remote unit; a handshake code uniquely identifying said portable remote unit as the source of said first RF signals; and a descrambling code used by said base unit to descramble the voice signals received in the first RF signals.

3. The amplification system according to claim 2, wherein said portable remote unit further comprises a rechargeable battery and said base unit further comprises a battery charger adapted to charge the rechargeable battery.

4. The amplification system according to claim 3, wherein:

said base unit further comprises a memory coupled to the central processing unit of said base unit and adapted to store the handshake code; and

said portable remote unit further comprises a memory coupled to the central processing unit of said portable remote unit, the handshake code being downloaded from the memory of said base unit to the memory of said portable remote unit when the rechargeable battery of said portable remote unit is being charged by the battery charger of said base unit.

5. The amplification system according to claim 1, further comprising:

a DC voltage source which applies a constant bias voltage to the communications interface whenever the system is operating.

6. The amplification system according to claim 1, further comprising:

an audio power amplifier receiving the voice signals from the communications interface and amplifying the voice signals; and

a loudspeaker responsive to the amplified voice signals produced by said audio power amplifier, for projecting amplified, audible voice signals.

7. The amplification system according to claim 1, wherein said portable remote unit further comprises a housing configured to be carried on a person, said microphone being external to said housing.

8. The amplification system according to claim 1, wherein said portable remote unit further includes a channel scan selector for generating a scan code as one of said control signals, said base unit being responsive to the scan code to select a different transmit frequency for the transmitter of said portable remote unit.

9. The amplification system according to claim 1, wherein said portable remote unit further includes:

a mute selector for preventing the communications interface from delivering the voice signals to an external device;

an ON selector for activating the system; and

an OFF selector for deactivating the system.

10. The amplification system according to claim 1, wherein said portable remote unit further comprises:

a compressor circuit responsive to the voice signals received from the microphone for compressing a bandwidth of the voice signals to a compressed bandwidth; and

a bandpass filter downstream of the compressor circuit and upstream of the transmitter of said portable remote unit, said bandpass filter receiving the compressed bandwidth voice signals and having a pass band corresponding to the compressed bandwidth;

and wherein said base unit further comprises:

an expander circuit responsive to the voice signals detected by the receiver of said base unit for expanding the compressed bandwidth of the voice signals.

11. The amplification system according to claim 10, wherein said compressor circuit and said expander circuit are one of: a vocoder and a waveform coder.

12. The amplification system according to claim 1, wherein the amplification system is a classroom amplification system for projecting a person's voice throughout a classroom, said portable remote unit being configured to be carried by the person.

13. The amplification system according to claim 12, wherein said classroom amplification system further includes:

an audio power amplifier system receiving the voice signals from the communications interface of said base unit and amplifying the voice signals; and

a loudspeaker system, including at least one loudspeaker disposed within the classroom, responsive to the amplified voice signals produced by said audio power amplifier system, for projecting amplified, audible voice signals throughout the classroom.

14. An method of amplifying sound, comprising the steps of:

producing voice signals from a detected voice;

generating first RF signals containing the voice signals and control signals;

transmitting the first RF signals from a portable remote unit to a base unit;

detecting the first RF signals at the base unit and separating the first RF signals into the voice signals and the control signals;

delivering the voice signals from a communications interface of the base unit to an external device only if the control signals received by the base unit have predetermined values; and

transmitting second RF signals from the base unit to the portable remote unit, wherein the second RF signals contain control signals but no voice signals, thereby effecting one-way transmission of voice signals and two-way transmission of control signals between the portable remote unit and the base unit.

15. The method according to claim 13, wherein the control signals include: a frequency identity code which identifies a transmit frequency of said portable remote unit; a handshake code uniquely identifying said portable remote unit as the source of said first RF signals; and a descrambling code used by said base unit to descramble the voice signals received in the first RF signals.

16. The method according to claim 15, further comprising the step of:

charging a rechargeable battery of the portable remote unit with a battery charger of the base unit.

17. The method according to claim 16, further comprising the step of:

downloading the handshake code from a memory of the base unit to a memory of the portable remote unit while the battery of the portable remote unit is being charged.

18. The method according to claim 14, further comprising the step of:

applying a constant bias voltage to the communications interface whenever the base unit is operating.

19. The method according to claim 14, further comprising the steps of:

amplifying the voice signals supplied from the communications interface; and

projecting an amplified, audible sound from the amplified voice signals.

20. The method according to claim 14, further comprising the step of:

disposing at least a portion of the portable remote unit in a housing configured to be carried on a person.

21. The method according to claim 14, further comprising the step of:

sending a scan code from the portable remote unit to the base unit in response to user selection of a channel scan function;

progressively changing a frequency of an oscillator of the base unit to identify a transmission channel substantially free of interference;

transmitting a control code from the base unit to the portable remote unit indicating a new transmission channel; and

transmitting the first RF signals at a frequency corresponding to the new transmission channel.

22. The method according to claim 14, further comprising the steps of:

sending a mute control code from the portable remote unit to the base unit in response to user selection of a mute function; and

preventing the communications interface from delivering the voice signals to an external device in response to the mute control code.

23. The method according to claim 14, further comprising the steps of:

compressing a bandwidth of the voice signals to a compressed bandwidth;

passing the compressed bandwidth voice signals through a bandpass filter having a pass band corresponding to the compressed bandwidth prior to transmission to the base unit; and

expanding the compressed bandwidth of the voice signals after reception by the base unit.

24. The method according to claim 14, further comprising the steps of:

disposing the portable remote unit on a person within a classroom;

disposing the base unit within the classroom;

amplifying the voice signals supplied from the communications interface; and

projecting an amplified, audible sound from the amplified voice signals throughout the classroom.